

IN THE DECLARATION OF MELVIN BERNHARD

Page 4, line 20, delete "new".

Page 5, line 3, delete "present invention" and insert --Apecs Silver Alloy--.

Page 5, line 16, delete "silver alloy of the claimed invention" and insert
--Apecs Silver Alloy--.

Page 6, line 2, delete "claimed invention" and insert --Apecs Silver Alloy--.

Page 6, line 5, delete "of the claimed invention".

Page 6, line 10, delete "composition".

REMARKS

Claims 1-4, 6-15, 17-23 are pending in the application and are at issue.

Reconsideration of the rejection of claims 1-10 under 35 USC Section 112 second paragraph as indefinite, as respectfully requested. Independent claim 1 has been amended to state that silicone is present in the range of 0.02-2.0% by weight. Support for this range of silicone in the fire scale resistant silver alloy of Claim 1 is found on Page 2, line 32, and Page 4, lines 15 and 24.

Claims 2-4 and 6-10 ultimately depend from Claim 1. The Examiner has made no specific 112 rejections of claims 2-4 and 6-10. Applicant believes the 112 rejection has been overcome.

Reconsideration of the rejection of Claims 1-4, 6-15 and 17-23 under 35 U.S.C. § 103(a) as obvious over *Bernard et al*, US Patent No. 5,039,479, in view of *Rateau et al* GB 2,255,348, is respectfully requested.

Independent Claim 1 of the present invention is directed toward a fire scale resistant silver alloy composition exhibiting improved work hardenability. The silver alloy composition of Claim 1 contains at least 86% Ag by weight, no more than 5.5% Cu by weight, and low concentrations of Zn and Si combined to an amount similar to the Cu concentration. The interplay of the additives to the silver is a complex one, and is determined as to expressed properties in an entirely empirical manner.

The zinc and silver of Claim 1 act to deoxidize the silver alloy composition during the melting process, thus resulting in a fire scale resistant silver alloy. The claimed invention additionally contains a small amount of germanium which improves the work hardenability of the fire scale resistant silver alloy during post-melt processing, such as casting, hot working or annealing, when the silver alloy composition remains hot after it has been solidified. The trace amount of germanium in the fire scale resistant silver alloy composition of Claim 1 is believed to increase the hardenability of the alloy by remaining in solid solution during post-melt hot processes as described above, rather than sacrificially consumed in these processes. The zinc and silver of the fire scale resistant silver alloy of Claim 1 are instead oxidized in the composition during the melting process rather than the germanium or small amount of copper in the alloy. The fire scale resistant silver alloy composition of Claim 1 is particularly useful for jewelry making, due to its improved work hardening performance over known fire scale resistant silver alloys.

There is no teaching in *Bernard et al.* nor *Rateau et al.* of adding germanium to a fire scale resistant silver alloy. Neither *Bernard et al.* nor *Rateau et al.* address the unique problems associated with increasing work hardenability during the post-melting process of a fire scale resistant silver alloy. Both *Bernard et al.* and *Rateau et al.* teach increasing the fire scale resistance of a silver-copper alloy. There is no suggestion in either *Bernard et al.* nor *Rateau et al.* of using germanium in a fire scale resistant silver alloy composition to provide for superior hardenability over other fire scale resistant silver alloys.

The *Rateau et al.* reference, considered as a whole, as is statutorily required, teaches the use of germanium to increase the fire scale resistance of a silver-copper alloy. *Rateau et al.* does not teach the use of germanium to increase the hardness of an already fire scale resistant silver alloy, but rather teaches the use of germanium as a replacement for silicone and other elements known to have deoxidization properties in order to increase the fire scale resistance of a silver-copper alloy. *Rateau et al.* specifically teaches away from the use of germanium with already fire scale resistant silver alloys, such as the composition of Claim 1, based on its teaching of replacing silver with germanium, rather than adding germanium to a fire scale resistant silver alloy containing silicone. *Rateau et al.* teaches that silicone is inscalable in silver and thus gives rise to alloys which are brittle to varying degrees. The

composition of Claim 1 does not exhibit brittleness and in fact is well knowledgeable to a useful degree. Applicant has conducted tests considering the non-brittleness of the composition of Claim 1 and can arrange to supply the examiner with a declaration to this effect if required.

It is not proper for the Examiner to combine parts of the *Rateau et al.* reference, namely, the disclosure of germanium, to the *Bernard et al.* reference to get Claim 1 of the present invention, without considering *Rateau et al.* as a whole. As a whole, *Rateau et al.* teaches germanium added to a silver-copper alloy, and does not teach germanium added to a fire scale resistant silver alloy. Likewise, the claimed invention must also be considered as a whole and not just as individual elements lumped together. Thus it is not the differences between the references *Bernard et al.* and *Rateau et al.* that would have been obvious, but whether the claimed invention as a whole would have been obvious. *Stratflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983). The Examiner cannot disregard the claimed invention as a whole, which is a fire scale resistant silver alloy having increased work hardenability. The insight of the claimed invention as a whole, namely adding germanium to a fire scale resistant silver alloy in order to increase its work hardenability, is not part of the understanding or expectation of *Bernard et al.* or *Rateau et al.*. Thus, the composition of Claim 1 of the present invention, would not have been obvious to those skilled in the art at the time the invention was made. It is impermissible for the Examiner to view the references with the benefit of hindsight vision afforded by the claimed invention. Thus concluding that the cited references when combined, include each chemical of the complex composition Claim 1, disregarding the claimed invention as a whole, is using impermissible hindsight afforded by the claimed invention. Even though the use of germanium to increase the work hardenability of a fire scale resistant silver alloy has now been established, obviousness based on the two cited references cannot be predicated on what was not known at the time the invention is made. At the time the invention was made, *Bernard et al.* and *Rateau et al.* teach only increasing the fire scale resistance of silver alloys, and do not teach increasing the work hardenability of already fire scale resistant silver alloys.

"The fact that references can be combined or modified, does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination." In *In re Mills*, 916 F.2d 680, 16 USPQ, 1430 (Fed. Cir. 1990). There must be some

suggestion or motivation, either in the cited references, or in the knowledge generally available to one of ordinary skill in the art, to combine the reference's teaching, or in this case to combine the chemical elements of the cited references. The lack of motivation or teaching in the two cited references, as well to those skilled in the art at the time the invention was made, of adding germanium to a fire scale resistant silver alloy to increase its work hardenability, cannot render obvious Claim 1.

The Melvin Bernhard Declaration was meant to replace the Eccles Declaration, as the Examiner made it very clear in his Advisory and Office Action that the Eccles Declaration would not be considered by him as objective evidence. Thus we will not argue further in this response the weight of the Eccles Declaration. However, Applicant reserves his right to reconsider the weight of the Eccles Declaration at a later date.

Melvin Bernhard, inventor of the Bernhard patent, filed a Declaration under Rule 132, submitted in our CPA application on December 16, 1998, providing further evidence of non-obviousness of independent Claim 1. The ultimate determination of patentability is based on the entire record, and objective evidence or secondary considerations, such as commercial success, long-felt need, failure of others, which must be considered when they are presented. Declarant, Melvin Bernhard, incorporater of United Precious Metal, refining Company, a major manufacture of jewelry grade silver alloys, is an inventor of two US patents for silver alloy compositions and has worked in research and development of precious metals, including silver alloys for United Precious Metal, since 1988. Melvin Bernhard is clearly one of ordinary skill in the art. A person of ordinary skill in the art is presumed to have perfect knowledge of all the pertinent prior art. *Custom Accessories, Inc. v. Jeffrey-Allan Industries, Inc.* 807 F.2D 955, 962, 1 USPQ2D 1196,1201 (Fed.Cir.1986). Melvin Bernhard, as others of ordinary skill in the art is thus presumed to have knowledge of all pertinent prior art, namely knowledge of the *Bernhard* and *Rateau* patents.

Additionally, as a person of ordinary skill in the art, Melvin Bernhard is qualified to present his opinion relating to the manufacture of precious metals during the years he is actively engaged in this precious metal business as described above. The Examiner has been very vague as to what type of probative evidence he considers acceptable to support Melvin Bernhard's opinions. The Examiner should state whether he believes he will only accept

expert opinion as probative evidence, if this is the case. In any event, Bernhard would be considered an expert due to his patentable contributions to the art.

The Examiner questions whether United Precious Metal is a licensee or an exclusive licensee of the present application, however the Examiner does not explain why such information is pertinent. Whether United Precious Metal is either a licensee or exclusive licensee, the facts remain the same that neither type of licensee would enter into a licensing agreement if the invention was obvious or known in the art. Neither a licensee nor an exclusive licensee would operate in a manner contrary to their own economic interest, and if the present application was obvious to one skilled in the art such as Melvin Bernhard, it can be presumed that he would not license a technology that is free to the public, and could not be protected by patent. Also, the declaration of Melvin Bernhard has been amended to more clearly identify the fire scale resistant silver alloy composition of Claim 1 as the Apeps silver alloy referred to in Melvin Bernhard's declaration. In view of the above arguments, amended Claim 1 is believed allowable.

Claims 2-4 and 6-10 ultimately depend from Claim 1 and are believed allowable for the same reasons thereof.

Dependant Claims 11, 12 and 17-20 specify further embodiments of the claimed invention and are believed allowable for the same reasons as stated above for Claim 1.

Method Claims 13-15 and 21-23 provide for methods of producing fire scale resistant work hardenable, jewelry silver alloy according to the compositions of Claims 1, 7 and 9 respectively, and are believed allowable for the same reason as stated above for Claim 1.

Applicant asserts that in view of the foregoing amendments and arguments, all of the Examiner's rejections have been obviated. Applicant therefore respectfully requests withdrawal of the rejections and allowance of the application.

REQUEST FOR EXTENSION IN THE TERM

Applicant petitions the Commissioner of Patents and Trademarks to extend the time for response to the Office Action dated March 2, 1999, for 3 months, from June 2, 1999 to September 2, 1999. Submitted herewith is a check in the amount of \$475.00 to cover the cost of the extension. The Commissioner is hereby authorized to charge any underpayment or

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credit any overpayment regarding this matter to deposit account number 04-2219, referencing our docket number C35469.

Respectfully submitted,



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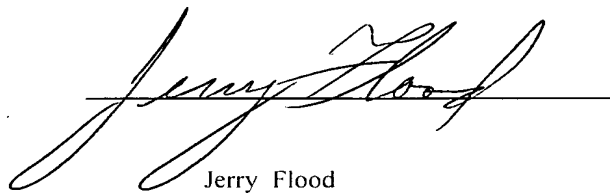
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Jerry Flood

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